REMARKS

The Office Action dated March 3, 2006 has been carefully reviewed and the following remarks have been made in consequence thereof.

Claims 1-6, 8-13, and 15-19 are pending in this application. Claims 1-6, 8-13, and 15-19 stand rejected.

The rejection of Claims 1-3, 8-10, 15, and 16 under 35 U.S.C. 103(a) as being unpatentable over Freund et al. (U. S. Patent No. 6,894,282) "Freund" in view of Kindem et al. (US 2005/0104000) "Kindem" is respectfully traversed.

Freund describes a radiation detector that includes a photodiode arrangement, a reflector part containing scintillators, and a scattered radiation collimator with collimator plates fitted between two side parts. The reflector part has a base plate, on which a frame-shaped boundary wall is fitted. The space surrounded by the boundary wall is subdivided into a number of compartments by the partitions running parallel to one another and parallel to two mutually opposite sections of the boundary wall. The compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment. Thus the individual scintillators, except at their side facing the photodiode arrangement, are surrounded by walls of the reflector part, whether by the base plate, or by the boundary wall or by the partitions. The reflector part is an injection-molded or die-cast part, formed from an optically reflective material, for example, from epoxy resin treated with titanium oxide. The reflector part containing the scintillators and the photodiode arrangement are joined together to form a unit.

Kindem describes a scintillator assembly including at least one scintillator pixel and a preformed reflector such that at least a portion of the scintillator material fits within the preformed reflector. The reflector assembly may have a single pre-formed unit or a plurality of subassemblies, one or a plurality of which having been pre-formed prior to insertion of one or a plurality of scintillator pixels. The reflector assembly may provide for the formation of intentional air gaps between one or a plurality of reflector walls and one or a plurality of scintillator pixels.

Applicant respectfully submits that the Section 103 rejection of the presently pending claim is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been obvious to one of ordinary skill in the art to modify Freund according to the teachings of Kindem More specifically, as is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. Neither Freund or Kindem, alone or in combination, describe or suggest the claimed combination. Rather, the present Section 103 rejection appears to be based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically Freund is cited for its alleged teaching of all of the elements of the claimed invention except that that the pre-formed molded reflector is fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material, and Kindem is cited for its alleged teaching of a reflector made of polyethylene filled with titanium dioxide. Since there is no teaching or suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant respectfully requests that the Section 103 rejection of Claims 1-3, 8-10, 15, and 16 be withdrawn.

Moreover, Applicants respectfully submit that no motivation for the combination can be found within Freund and Kindem, as Freund and Kindem teach away from each other and the present invention. Specifically, Freund describe that the compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment wherein the dimensions of the scintillators are coordinated with the compartments in such a way that the scintillators completely fill the compartments, and Kindem describe that the reflector assembly includes intentional air gaps between one or a plurality of reflector walls and one or a plurality of scintillator pixels.

If art "teaches away" from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C.

Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. More specifically, Applicants respectfully submit that Freund teaches away from Kindem and the present invention, and as such, there is no suggestion or motivation to combine Freund and Kindem.

Further, and to the extent understood, neither Freund or Kindem, alone or in combination, describe or suggest the claimed combination, and as such, the presently pending claims are patentably distinguishable from the cited combination. Claim 1 recites a method for fabricating a scintillator array for a radiation detector of an imaging system wherein the method includes "fabricating a scintillator array including a plurality of scintillators arranged side by side, each of the scintillators separated from adjacent scintillators such that a gap is defined therebetween, each of the scintillators having a geometric shape defined by a plurality of external surfaces...fabricating a pre-formed molded reflector having a plurality of cavities defined therein, each cavity having a geometric shape substantially similar to each scintillator geometric shape, the pre-formed reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material...coupling the scintillator array and the pre-formed reflector such that each respective scintillator is positioned at least partially within at least one respective reflector cavity."

Neither Freund or Kindem, alone or in combination, describe or suggest a method for fabricating a scintillator array for a radiation detector of an imaging system as recited in Claim 1. Moreover, neither Freund nor Kindem, alone or in combination, describe or suggest a pre-formed reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material. Rather, Freund describes that the reflector part has a base plate, on which a frame-shaped boundary wall is fitted. Because the frame-shaped boundary wall is fitted to the base plate, the reflector part is not pre-formed. Freund further describes that the space surrounded by the boundary wall is subdivided into a number of compartments by partitions, which are also not pre-formed. Neither Freund nor Kindem, alone or in combination, describe or suggest fabricating a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Rather, Freund describes that the compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment. Accordingly, the rod-shaped scintillators that are adhesively bonded into the respective compartment cannot fairly be equated with a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Kindem describes reflector made of polyethylene filled with titanium dioxide. Applicants respectfully traverse the assertion made in the Office Action that polyethylene is a thermoplastic material. The present specification sets out the definition for thermoplastic as "a liquid that is converted to a solid, but can be converted back to liquid form by applying heat." The Office Action does not provide a cite to a prior art reference that describes polyethylene as exhibiting the characteristics of a thermoplastic as defined in the specification. For at least the reasons above, Claim 1 is submitted to be patentable over Freund in view of Kindem.

Claims 2 and 3 depend from independent Claim 1. When the recitations of Claims 2 and 3 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2 and 3 are likewise patentable over Freund in view of Kindem.

Claim 8 recites a radiation detector including "a scintillator array comprising a plurality of scintillators arranged side by side, each of said scintillators separated from adjacent scintillators such that a gap is defined therebetween, each of said scintillators having a geometric shape defined by a plurality of external surfaces...a pre-formed molded reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material, said reflector comprising a plurality of cavities defined therein, each said cavity having a geometric shape substantially similar to each said scintillator geometric shape, said scintillator array coupled to said pre-formed reflector such that each said respective scintillator is positioned at least partially within at least one respective reflector cavity."

Neither Freund or Kindem, alone or in combination, describe or suggest a radiation detector as recited in Claim 8. Moreover, neither Freund nor Kindem, alone or in combination, describe or suggest a pre-formed reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material. Rather, Freund describes that the reflector part has a base plate, on which a frame-shaped boundary wall is fitted. Because the frame-shaped boundary wall is fitted to the base plate, the reflector part is not pre-formed. Freund further describes that the space surrounded by the boundary wall is subdivided into a number of compartments by partitions, which are also not pre-formed. Neither Freund nor Kindem, alone or in combination, describe or suggest fabricating a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Rather, Freund describes that the compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment. Accordingly, the rod-shaped scintillators that are adhesively bonded into the respective compartment cannot fairly be equated with a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Kindem describes reflector made of polyethylene filled with titanium dioxide. Applicants respectfully traverse the assertion made in the Office Action that polyethylene is a thermoplastic material. The present specification sets out the definition for thermoplastic as "a liquid that is converted to a solid, but can be converted back to liquid form by applying heat." The Office Action does not provide a cite to a prior art reference that describes polyethylene as exhibiting the characteristics of a thermoplastic as defined in the specification. For at least the reasons above, Claim 8 is submitted to be patentable over Freund in view of Kindem.

Claims 9 and 10 depend from independent Claim 8. When the recitations of Claims 9 and 10 are considered in combination with the recitations of Claim 8, Applicants submit that dependent Claims 9 and 10 are likewise patentable over Freund in view of Kindem.

Claim 15 recites a computed tomography (CT) imaging system including a radiation source...a radiation detector comprising...a scintillator array comprising a plurality of scintillators arranged side by side, each of said scintillators separated from adjacent scintillators such that a gap is defined therebetween, each of said scintillators having a geometric shape defined by a plurality of external surfaces...a pre-formed molded reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material, said reflector comprising a plurality of cavities defined therein, each said cavity having a geometric shape substantially similar to each said scintillator geometric shape, said scintillator array coupled to said pre-formed reflector such that each said respective scintillator is positioned at least partially within at least one respective reflector cavity...a computer operationally coupled to said radiation source and said radiation detector."

Neither Freund or Kindem, alone or in combination, describe or suggest a radiation detector as recited in Claim 15. Moreover, neither Freund nor Kindem, alone or in combination, describe or suggest a pre-formed reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material. Rather, Freund describes that the reflector part has a base plate, on which a frame-shaped boundary wall is fitted. Because the frame-shaped boundary wall is fitted to the base plate, the reflector part is not pre-formed. Freund further describes that the space surrounded by the boundary wall is subdivided into a number of compartments by partitions, which are also not pre-formed. Neither Freund nor Kindem, alone or in combination, describe or suggest fabricating a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Rather, Freund describes that the compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment. Accordingly, the rod-shaped scintillators that are adhesively bonded into the respective compartment cannot fairly be equated with a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Kindem describes reflector made of polyethylene filled with titanium dioxide. Applicants respectfully traverse the assertion made in the Office Action that polyethylene is a thermoplastic material. The present specification sets out the definition for thermoplastic as "a liquid that is converted to a solid, but can be converted back to liquid form by applying heat." The Office Action does not provide a cite to a prior art reference that describes polyethylene as exhibiting the characteristics of a thermoplastic as defined in the specification. For at least the reasons above, Claim 15 is submitted to be patentable over Freund in view of Kindem.

Claim 16 depends from independent Claim 15. When the recitations of Claim 16 are considered in combination with the recitations of Claim 15, Applicants submit that dependent Claim 16 likewise is patentable over Freund in view of Kindem.

For the reason set forth above, Applicant respectfully requests that the Section 103 rejection of Claims 1-3, 8-10, 15, and 16 be withdrawn.

The rejection of Claims 4-6, 11-13, and 17-19 under 35 U.S.C. § 103(a) as being unpatentable over Freund, in view of Kindem, and further in view of Duclos et al. (U.S. Patent 6,298,113) "Duclos" is respectfully traversed.

Freund and Kindem are described above. Duclos describes a scintillator pack including an x-ray damage shield. The scintillator pack has an array of scintillator pixels. A scintillation light reflecting layer that reflects scintillation light from the pixels is included at least between the scintillator pixels in inter-scintillator regions. An x-ray absorbing layer acts as the x-ray damage shield to protect the portions of the scintillation light reflecting layer from x-rays. The x-ray absorbing layer is formed selectively and in a self aligned manner in regions over the inter-scintillator regions. The x-ray absorbing layer does not extend between the scintillators and do not prevent inter-scintillator crosstalk.

Applicant respectfully submits that the Section 103 rejection of the presently pending claim is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been obvious to one of ordinary skill in the art to modify Freund and Kindem according to the teachings of Duclos. More specifically, as is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Freund and Kindem or Duclos, alone or in combination, describe or suggest the claimed combination. Rather, the present Section 103 rejection appears to be based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Specifically Freund is cited for its alleged teaching of all of the elements of the claimed invention except that that the pre-formed molded reflector is fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material, and Kindem is cited for its alleged teaching of a reflector made of polyethylene filled with titanium dioxide, and Duclos is cited for its alleged teaching of a reflector including a plurality of interstitial plates formed integrally with the reflector wherein the interstitial plates comprise at least one of a tungsten material, a tantalum material, a molybdenum material, and a lead material. Since there is no teaching or suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant respectfully requests that the Section 103 rejection of Claims 4-6, 11-13, and 17-19 be withdrawn.

Moreover, Applicants respectfully submit that no motivation for the combination can be found within Freund, Kindem, and Duclos, as Freund, Kindem, and Duclos teach away from each other and the present invention. Specifically, Freund describe that the compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment wherein the dimensions of the scintillators are coordinated with the compartments in such a way that the scintillators completely fill the compartments, and Kindem describe that the reflector assembly includes intentional air gaps between one or a plurality of reflector walls and one or a plurality of scintillator pixels, and Duclos describes an x-ray absorbing layer that is formed on a scintillation light reflecting layer, but Duclos do not describe a plurality of interstitial plates formed integrally with said pre-formed reflector.

If art "teaches away" from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. More specifically, Applicants respectfully submit that Freund, Kindem, and Duclos teaches away from each other and the present invention, and as such, there is no suggestion or motivation to combine Freund and Kindem with Duclos.

Further, and to the extent understood, neither Freund or Kindem, alone or in combination, describe or suggest the claimed combination, and as such, the presently pending claims are patentably distinguishable from the cited combination. Claim 1 recites a method for fabricating a scintillator array for a radiation detector of an imaging system wherein the method includes "fabricating a scintillator array including a plurality of scintillators arranged side by side, each of the scintillators separated from adjacent scintillators such that a gap is defined therebetween, each of the scintillators having a geometric shape defined by a plurality of external surfaces...fabricating a pre-formed molded reflector having a plurality of cavities defined therein, each cavity having a geometric shape substantially similar to each scintillator geometric shape, the pre-formed reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material...coupling the scintillator array and the pre-formed reflector such that each respective scintillator is positioned at least partially within at least one respective reflector cavity."

None of Freund, Kindem, and or Duclos, alone or in combination, describe or suggest a method for fabricating a scintillator array as recited in Claim 1. Specifically, none of Freund, Kindem, and nor Duclos, alone or in combination, describe or suggest a pre-formed reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material. Rather, Freund describes that the reflector part has a base plate, on which a frame-shaped boundary wall is fitted. Because the frame-shaped boundary wall is fitted to the base plate, the reflector part is not pre-formed. Freund further describes that the space surrounded by the boundary wall is subdivided into a number of compartments by partitions, which are also not pre-formed. None of Freund, Kindem, and or Duclos, considered alone or in combination, describe or suggest fabricating a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Rather, Freund describes that the compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment. Accordingly, the rod-shaped scintillators that are adhesively bonded into the respective compartment cannot fairly be equated with a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Kindem describes reflector made of polyethylene filled with titanium dioxide. Applicants respectfully traverse the assertion made in the Office Action that polyethylene is a thermoplastic material. The present specification sets out the definition for thermoplastic as "a liquid that is converted to a solid, but can be converted back to liquid form by applying heat." The Office Action does not provide a cite to a prior art reference that describes polyethylene as exhibiting the characteristics of a thermoplastic as defined in the specification. For at least the reasons above, Claim 1 is submitted to be patentable over Freund in view of Kindem and further in view of Duclos.

Claims 4-6 depend from independent Claim 1. When the recitations of Claims 4-6 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 4-6 are likewise patentable over Freund in view of Kindem and further in view of Duclos.

Claim 8 recites a radiation detector including "a scintillator array comprising a plurality of scintillators arranged side by side, each of said scintillators separated from adjacent scintillators such that a gap is defined therebetween, each of said scintillators having a geometric shape defined by a plurality of external surfaces...a pre-formed molded reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material, said reflector comprising a plurality of cavities defined therein, each said cavity having a geometric shape substantially similar to each said scintillator geometric shape, said scintillator array coupled to said pre-formed reflector such that each said respective scintillator is positioned at least partially within at least one respective reflector cavity."

None of Freund, Kindem, and or Duclos, alone or in combination, describe or suggest a radiation detector as recited in Claim 8. Specifically, none of Freund, Kindem, and nor Duclos, alone or in combination, describe or suggest a pre-formed reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material. Rather, Freund describes that the reflector part has a base plate, on which a frame-shaped boundary wall is fitted. Because the frame-shaped boundary wall is fitted to the base plate, the reflector part is not pre-formed. Freund further describes that the space surrounded by the boundary wall is subdivided into a number of compartments by partitions, which are also not pre-formed. None of Freund, Kindem, and or Duclos, considered alone or in combination, describe or suggest fabricating a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Rather, Freund describes that the compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment. Accordingly, the rod-shaped scintillators that are adhesively bonded into the respective compartment cannot fairly be equated with a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Kindem describes reflector made of polyethylene filled with titanium dioxide. Applicants respectfully traverse the assertion made in the Office Action that polyethylene is a thermoplastic material. The present specification sets out the definition for thermoplastic as "a liquid that is converted to a solid, but can be converted back to liquid form by applying heat." The Office Action does not provide a cite to a prior art reference that describes polyethylene as exhibiting the characteristics of a thermoplastic as defined in the specification. For at least the reasons above, Claim 1 is submitted to be patentable over Freund in view of Kindem and further in view of Duclos.

Claims 11-13 depend from independent Claim 8. When the recitations of Claims 11-13 are considered in combination with the recitations of Claim 8, Applicants submit that dependent Claims 11-13 are likewise patentable over Freund in view of Kindem and further in view of Duclos.

Claim 15 recites a computed tomography (CT) imaging system including a radiation source...a radiation detector comprising...a scintillator array comprising a plurality of scintillators arranged side by side, each of said scintillators separated from adjacent scintillators such that a gap is defined therebetween, each of said scintillators having a geometric shape defined by a plurality of external surfaces...a pre-formed molded reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material, said reflector comprising a plurality of cavities defined therein, each said cavity having a geometric shape substantially similar to each said scintillator geometric shape, said scintillator array coupled to said pre-formed reflector such that each said respective scintillator is positioned at least partially within at least one respective reflector cavity...a computer operationally coupled to said radiation source and said radiation detector."

None of Freund, Kindem, or Duclos, alone or in combination, describe or suggest a computed tomography (CT) imaging system as recited in Claim 15. Specifically, none of Freund, Kindem, nor Duclos describe or suggest a radiation detector that includes a pre-formed reflector including a plurality of cavities defined therein. a pre-formed reflector fabricated from at least one of a thermo set material and a thermo plastic material, the thermo set and thermo plastic material each including at least one of a titanium dioxide, a tungsten oxide material, a tantalum oxide material, a molybdenum oxide material, and a lead oxide material. Rather, Freund describes that the reflector part has a base plate, on which a frame-shaped boundary wall is fitted. Because the frame-shaped boundary wall is fitted to the base plate, the reflector part is not pre-formed. Freund further describes that the space surrounded by the boundary wall is subdivided into a number of compartments by partitions, which are also not pre-formed. Neither Freund nor Kindem, alone or in combination, describe or suggest fabricating a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Rather, Freund describes that the compartments each receive a rod-shaped scintillator, which is adhesively bonded into the respective compartment. Accordingly, the rod-shaped scintillators that are adhesively bonded into the respective compartment cannot fairly be equated with a scintillator array including a plurality of scintillators arranged side by side wherein each of the scintillators is separated from adjacent scintillators such that a gap is defined therebetween. Kindem describes reflector made of polyethylene filled with titanium dioxide. Applicants respectfully traverse the assertion made in the Office Action that polyethylene is a thermoplastic material. The present specification sets out the definition for thermoplastic as "a liquid that is converted to a solid, but can be converted back to liquid form by applying heat." The Office Action does not provide a cite to a prior art reference that describes polyethylene as exhibiting the characteristics of a thermoplastic as defined in the specification. and Duclos describes an x-ray absorbing layer that is formed on a scintillation light reflecting layer, but Duclos do not describe a plurality of interstitial plates formed integrally with said pre-formed reflector. Further, none of Freund, Kindem, nor Duclos describe or suggest a radiation detector that includes a scintillator array coupled to the pre-formed reflector. Rather, Freund describe that each scintillator segment is surrounded on its sides and its top by an optical reflector that is spaced from the segment by an air gap and Duclos describe an x-ray absorbing layer that is formed on a scintillation light reflecting layer. For at least the reasons above, Claim 15 is submitted to be patentable over Freund in view of Duclos.

Claims 17-19 depend from independent Claim 15. When the recitations of Claims 17-19 are considered in combination with the recitations of Claim 15, Applicants submit that dependent Claims 17-19 are likewise patentable over Freund in view of Kindem and further in view of Duclos.

For the reason set forth above, Applicant respectfully requests that the Section 103 rejection of Claims 4-6, 11-13, and 17-19 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

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